



SUPPLEMENTAL DECLARATION FOR REISSUE APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

We are an original, first and joint inventor of the subject matter which is described and claimed in United States Patent No. 6,063,161, granted May 16, 2000, and for which a reissue patent is sought on the invention entitled **FLOW REGULATED PRESSURE SWING ADSORPTION SYSTEM**, the specification of which was filed on April 12, 2004 as United States Reissue Application No. 10/823,471, which is a continuation of United States Reissue Patent Application No. 10/150,784, filed May 16, 2002, now RE38,493.

I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I believe the original patent to be wholly or partly inoperative or invalid by reason that the patent claims less than I had a right to claim in the patent. Thus, I hereby indicate my intent to seek broadened claims. My intent to seek broadened claims also is indicated by the Amendment filed with this Supplemental Declaration. At least one error upon which reissue is based is described below. I also hereby affirm that this reissue application was filed diligently upon discovery of the errors listed below.

At least one error upon which reissue is based is described as follows:

Claim 1, for example, includes certain features that are not required for practicing the broadest aspects of the invention, such as requiring a process for separating first and second components of a feed gas mixture, as referred to in column 29, lines 4-5. This unnecessary limitation renders the patent partly inoperative by unduly limiting the claim. The error arose in the prosecution of the original application, which resulted in the issuance of the patent.

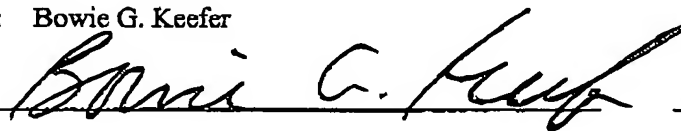
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant or the inventors.

I hereby grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Supplemental Declaration any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for submitting this document.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First Inventor: Bowie G. Keefer

Inventor's Signature



11 Oct '05
Date

Residence: 4324 West 11th Avenue, Vancouver, B.C., Canada V6R 2M1

Citizenship: Canadian

Post Office Address: 4324 West 11th Avenue, Vancouver, B.C., Canada V6R 2M1

Full Name of Second Inventor: David G. Doman

Inventor's Signature

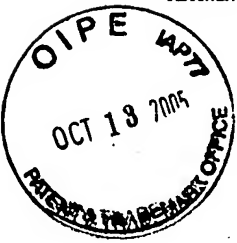


11 OCT 2005
Date

Residence: 5775 191A Street, Surrey, B.C., Canada V3S 7M8

Citizenship: Canadian

Post Office Address: 5775 191A Street, Surrey, B.C., Canada V3S 7M8



SUPPLEMENTAL DECLARATION FOR REISSUE APPLICATION BY THE ASSIGNEE

I, Edward J. Rode, hereby declare that:

My residence and citizenship are stated below next to my name.

I am authorized to act on behalf of assignee, QuestAir Technologies, Inc., and the title of my position with said assignee is Vice President of Advanced Development.

In accordance with Title 37, Code of Federal Regulations, § 3.73, I hereby certify that I have reviewed the evidentiary documents with respect to the assignee's ownership of United States Patent No. 6,063,161, Keefer et al., entitled **FLOW REGULATED PRESSURE SWING ADSORPTION SYSTEM**, issued May 16, 2000, and that, to the best of my knowledge and belief, the entire title to the patent is vested in QuestAir Technologies, Inc. The assignee listed on Patent No. 6,063,161 on issuance was SoFinov Société Financière d'Innovation, Inc., which then assigned its rights to Questor Industries, Inc., which, as indicated by the attached Certificates of Amendment, is the corporate predecessor to Quest Air Gases Inc., which in turn is the corporate predecessor to QuestAir Technologies, Inc., the current patent assignee.

I believe Bowie G. Keefer and David G. Doman to be the original, first and joint inventors of the subject matter which is described and claimed in United States patent No. 6,063,161, granted May 16, 2000, for which a reissue patent is sought on the invention entitled **FLOW REGULATED PRESSURE SWING ADSORPTION SYSTEM**, the specification of which was filed on April 12, 2004 as United States Reissue Application No. 10/823,471, which is a continuation of United States Reissue Patent Application No. 10/150,784, filed May 16, 2002, now RE38,493.

I have reviewed and understand the contents of the above identified specification, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I verily believe the original patent to be wholly or partly inoperative or invalid by reason that the patent claims less than the patentees had a right to claim in the patent.

Claim 1, for example, includes certain features that are not required for practicing the broadest aspects of the invention, such as requiring a process for separating first and second components of a feed gas mixture, as referred to in column 29, lines 4-5. This unnecessary limitation renders the patent partly inoperative by unduly limiting the claim. The error arose in the prosecution of the original application,

which resulted in the issuance of the patent.

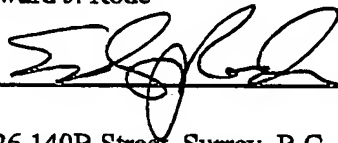
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant or inventors.

I hereby grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Declaration any further information which may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name: Edward J. Rode

Signature



October 11, 2005
Date

Residence: 2926 140B Street, Surrey, B.C., Canada V4PS 2J8

Citizenship: U.S.A.

Post Office Address: 2926 140B Street, Surrey, B.C., Canada V4PS 2J8

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Keefer et al.

Application No. 10/823,471

Filed: April 12, 2004

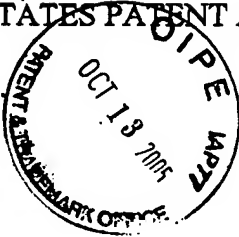
Confirmation No. 1626

For: FLOW REGULATED PRESSURE SWING
ADSORPTION SYSTEM

Examiner: Robert Spitzer

Art Unit: 1724

Attorney Reference No. 6454-68359-01



CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney or Agent
for Applicant(s)

Date Mailed

[Signature]
October 11, 2005

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

CONSENT BY ASSIGNEE FOR FILING OF REISSUE
PATENT APPLICATION

In accordance with Title 37, Code of Federal Regulations, Section 1.172, QuestAir Technologies, Inc., assignee of an undivided interest in U.S. Patent No. 6,063,161, entitled **FLOW REGULATED PRESSURE SWING ADSORPTION SYSTEM**, consents to the filing of reissue application No. 10/823,471, the specification of which was filed April 12, 2004.

In accordance with Title 37, Code of Federal Regulations, § 3.73, I hereby certify that I have reviewed the evidentiary documents with respect to the assignee's ownership of United States Patent No. 6,063,161, Keefer et al., entitled **FLOW REGULATED PRESSURE SWING ADSORPTION SYSTEM**, issued May 16, 2000, and that, to the best of my knowledge and belief, the entire title to the patent is vested in QuestAir Technologies, Inc. The assignee listed on Patent No. 6,063,161 on issuance was SoFinov Société Financière d'Innovation, Inc., which then assigned its rights to Questor Industries, Inc., which, as indicated by the attached Certificates of Amendment, is the corporate predecessor to Quest Air Gases Inc., which in turn is the corporate predecessor to QuestAir Technologies, Inc., the current patent assignee.

I am authorized to act on behalf of the assignee, QuestAir Technologies Inc., and the title of my position with said assignee is Vice President of Advanced Development.

Executed at Burnaby, BC, Canada on the 11th day of October, 2005.

By: _____

Name: Edward J. Rode

Title: Vice President, Advanced Development, QuestAir Technologies, Inc.

IN THE UNITED STATES PATENT AND TRADEMARKS OFFICE

27 September 2000

To: The Commissioner of Patents and Trade-Marks
Washington, D.C. 20231
U.S.A.

Attention: Ms. Joyce Johnson
Manager - Assignment Division

Dear Madam:

PETITION TO EXPEDITE RECORDATION OF ASSIGNMENT

The Petitioner respectfully petitions the Commissioner for the recordation of the attached assignment on an expedited basis for US Patent Nos. 4,702,903; 4,816,121; 4,968,329; 5,082,473; 5,096,469; 5,256,172; and 6,063,161, as set out on the attached Assignment Recordal Sheet, on the basis that the recordal is a condition of a business arrangement which is scheduled to be completed this week.

The Petitioner authorizes the Commissioner to charge Deposit Account 07-1750 for the requisite fee of \$120, including any additional fees required by this petition.

The Petitioner's undersigned patent agent can be reached by telephone at (416) 862-4425.

Respectfully submitted,

Robert J. Graham
Reg No. 43,430

RJG:aps
Encl.

ASSIGNMENT OF PATENTS

THIS ASSIGNMENT MADE AS OF JUNE 9, 1997.

AMONG: **BOWIE G. KEEFER**, Businessman, of 4324 West 11th Avenue,
Vancouver, British Columbia, V6R 2M1
Facsimile No. (604) 222-5509

("Keefer")

AND: **HIGHQUEST ENGINEERING INC.** a body corporate, having
an office at 3650 Westbrook Mall, Vancouver, British Columbia,
V6S 2L2
Facsimile No. (604) 222-5509

(the "Borrower")

AND: **SOFINOV SOCIÉTÉ FINANCIÈRE D'INNOVATION INC.**,
a body corporate, having an office at 1981 McGill College Avenue,
Montreal, Quebec, H3A 3C7
Facsimile No. (514) 847-2628

(the "Assignor")

AND: **QUESTOR INDUSTRIES INC.**, a body corporate, having an
office at 3650 Westbrook Mall, Vancouver, British Columbia,
V6S 2L2
Facsimile No. (604) 222-5509

(the "Assignee")

WHEREAS:

- A. The Borrower and the Assignor entered into a loan agreement dated June 21, 1996 pursuant to which the Assignor lent to the Borrower the sum of \$CAD250,000.00 (the "Loan") on the terms therein set forth;
- B. It was a condition precedent to the making of the Loan that each of Keefer and the Borrower execute and deliver an Assignment of Patents ("Assignment") to the Assignor, which Assignment was executed on June 26, 1996;
- C. Prior to execution of the Assignment, Keefer was the legal owner of the inventions

- 2 -

described in the Patents and Patent Applications listed on the attached schedule (herein referred to as the "Inventions") and the Borrower was the beneficial owner of such Inventions;

- D. The Borrower has repaid the Loan in full; and
- E. The Borrower is entitled to a discharge or reassignment of all security granted by the Borrower to the Assignor to secure repayment of the Loan, which includes the Assignor reassigning the Inventions to the Borrower, or as directed by Keefer and the Borrower.

KEEFER AND THE BORROWER HEREBY DIRECT that the Assignor assign its entire right, title and interest in and to the Inventions and the Patents and Patent Applications in all countries to the Assignee.

NOW THEREFORE, to all whom it may concern be it known that for and in consideration of the sum of one dollar (\$1.00) to it in hand paid by the Assignee, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby sells, assigns and transfers to the Assignee, its successors and assigns, its entire right, title and interest in and to the Inventions, Patents and Patent Applications in all countries and any continuations and divisions thereof, and all Letters Patent that may be obtained therefor in all countries.

AND the Assignor hereby undertakes, without liability, at any time upon request to do everything legally possible to assist the Assignee in the filing and prosecution of any patent application relating to the Inventions in any country, to sign such documents and do such things as may be required to give effective legal and registered title of the Assignee to the Inventions in any country, all without further consideration but at the expense of the Assignee.

IN WITNESS WHEREOF the parties hereto have hereunto executed this Assignment the year and day first above written.

SOFINOV SOCIÉTÉ FINANCIÈRE
D'INNOVATION INC.

By: 

Name: Denis Drouin

Capacity: PRESIDENT

by: 

Name: MARC ST-PIERRE

Capacity: VICE-PRESIDENT

HIGHQUEST ENGINEERING INC.

By: _____

Name: _____

Capacity: _____

- 2 -

described in the Patents and Patent Applications listed on the attached schedule (herein referred to as the "Inventions") and the Borrower was the beneficial owner of such Inventions;

- D. The Borrower has repaid the Loan in full; and
- E. The Borrower is entitled to a discharge or reassignment of all security granted by the Borrower to the Assignor to secure repayment of the Loan, which includes the Assignor reassigning the Inventions to the Borrower, or as directed by Keefer and the Borrower.

KEEFER AND THE BORROWER HEREBY DIRECT that the Assignor assign its entire right, title and interest in and to the Inventions and the Patents and Patent Applications in all countries to the Assignee.

NOW THEREFORE, to all whom it may concern be it known that for and in consideration of the sum of one dollar (\$1.00) to it in hand paid by the Assignee, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby sells, assigns and transfers to the Assignee, its successors and assigns, its entire right, title and interest in and to the Inventions, Patents and Patent Applications in all countries and any continuations and divisions thereof, and all Letters Patent that may be obtained therefor in all countries.

AND the Assignor hereby undertakes, without liability, at any time upon request to do everything legally possible to assist the Assignee in the filing and prosecution of any patent application relating to the Inventions in any country, to sign such documents and do such things as may be required to give effective legal and registered title of the Assignee to the Inventions in any country, all without further consideration but at the expense of the Assignee.

IN WITNESS WHEREOF the parties hereto have hereunto executed this Assignment the year and day first above written.

**SOFINOV SOCIÉTÉ FINANCIÈRE
D'INNOVATION INC.**

By: _____
Name: _____
Capacity: _____

HIGHQUEST ENGINEERING INC.

By: [Signature]
Name: BRUCE C. KEEFER
Capacity: PRESIDENT

QUESTOR INDUSTRIES INC

By: [Signature]
Name: Carl Hunter
Capacity: President

WITNESS to the signature
of Bowie G. Keefer:

[Signature]

[Signature]
BOWIE G. KEEFER

- 4 -

**AFFIDAVIT OF EXECUTION OF AN ASSIGNMENT EXECUTED
BY A COMPANY HAVING A CORPORATE SEAL**

I, Carmen Crépin, Corporate Secretary, of
(NAME) (CAPACITY)
Sofinov, Société financière d'innovation inc., whose full post office address is
1981 McGill College Avenue, Montréal, make oath and say:

That the seal affixed to the attached assignment is the seal of the said company and has been properly affixed in accordance with the constitution and by-laws of the said company, and has been verified in accordance therewith under the hands of the directors or officers whose signatures appear on the assignment in thereof.

Sworn before me at Montreal, Quebec,
Canada this 26th day of May, 1997.

Givelle Dupont, Avocate
Notary Public (Quebec)

Carmen Crépin
Corporate Secretary

- 6 -

Schedule of Patents and Patent Applications**Canadian Patents and Patent Applications:**

1,256,038	Method and Apparatus for Gas Separation and Synthesis
2,016,045	Gas Separation by Pressure Swing Adsorption
2,087,972-6	Extraction and Concentration of a Gas Component
2,087,973-4	Adsorptive Gas Separator with Inertial Energy Exchange
2,109,055	Thermally Coupled Pressure Swing Adsorption

U.S. Patents and Patent Applications:

4,702,903	Method and Apparatus for Gas Separation and Synthesis
4,816,121	Gas Phase Chemical Reactor
4,968,329	Pressure Swing Adsorption for Concentration of a Gas Component
5,082,473	Extraction and Concentration of a Gas Component
5,096,469	Adsorptive Gas Separator with Inertial Energy Exchange
5,256,172	Thermally Coupled Pressure Swing Adsorption
08/637,176	Flow Regulated Pressure Swing Adsorption System

European Patents:

0,143,537	Apparatus and Method for Gas Separation and Synthesis
-----------	---

Doc No.: T8465098GEN

RECORDATION FORM COVER SHEET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

PATENTS ONLY

MAM (PTO-1545 (Modified)
(Rev. 9/93)
US No. 005543311 (v. 01/4/94)
Copyright 1994-97 LegalStar
VREVIEW

Lab settings: In the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Sofinov Societe Financiere D'Innovation Inc.

Additional names(s) of conveying party(ies)

☐ Yes ☒ No

3 Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: June 9, 1997

2. Name and address of receiving party(ies):

Name: Questor Industries Inc.Internal Address: 3650 Westbrook Mall, Vancouver, British
Columbia, Canada, V6S 2L2Street Address: 3650 Westbrook Mall, Vancouver, British
Columbia, Canada, V6S 2L2

City: _____ State: _____ ZIP: _____

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

08/637,176 (Patent
No. 6,063,161)

B. Patent No.(s)

4,702,903
5,082,4734,816,121
5,096,4694,968,329
5,256,172Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Robert GrahamInternal Address: Gowling Lafleur Henderson, Suite 4900Commerce Court West, Toronto, Ontario, Canada,MSL 1J3Street Address: As Above

City: _____ State: _____ ZIP: _____

6. Total number of applications and patents involved: 77. Total fee (37 CFR 3.41):.....\$ 280.00☒ Enclosed - Any excess or insufficiency should be credited or debited to deposit account☒ Authorized to be charged to deposit account

8. Deposit account number:

07-1750

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Robert Graham, Reg. No. 43,430

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: 7

CANADA

PROVINCE OF BRITISH COLUMBIA

TO WIT:

)
)
)
)
)

TO ALL TO WHOM THESE PRESENTS

MAY COME, BE SEEN OR KNOWN:

I, IRENE M. STEWART, a Notary Public by Royal authority duly appointed, residing at the City of West Vancouver, in the Province of British Columbia, do certify and attest that the paper writing hereto annexed, marked with my Notarial Seal, are true copies of original documents produced to me and purporting to be:

1. Certificate of Change of Name from Questor Industries Inc. to Quest Air Gases Inc., signed by John S. Powell, Registrar of Companies, Province of British Columbia, and dated the 29th day of October, 1999.
2. Certificate of Continuance of Quest Air Gases Inc., signed by The Director, Industry Canada, and dated the 1st day of November, 1999.
3. Certificate of Amendment with respect to the change of name from Quest Air Gases Inc. to QuestAir Technologies Inc., signed by The Director, Industry Canada, and dated the 3rd day of May, 2000.

The said copies having been compared by me with the said original documents, an act whereof being requested I have granted under Notarial form and seal of office to serve and avail as occasion may require.

DATED at Vancouver, British Columbia, this 16th day of June, 2000.



A Notary Public in and for the Province of
British Columbia



NUMBER: 523944

**CERTIFICATE
OF
CHANGE OF NAME**
COMPANY ACT

I Hereby Certify that

QUESTOR INDUSTRIES INC.

has this day changed its name to

QUEST AIR GASES INC.

*Issued under my hand at Victoria, British Columbia
on October 29, 1999*



JOHN S. POWELL
Registrar of Companies
PROVINCE OF BRITISH COLUMBIA
CANADA



Industry Canada

Industrie Canada

**Certificate
of Continuance**

**Canada Business
Corporations Act**

**Certificat
de prorogation**

**Loi canadienne sur
les sociétés par actions**

QUEST AIR GASES INC.

367800-8

Name of corporation-Dénomination de la société

Corporation number-Numéro de la société

I hereby certify that the above-named corporation was continued under section 187 of the *Canada Business Corporations Act*, as set out in the attached articles of continuance.

Je certifie que la société susmentionnée a été prorogée en vertu de l'article 187 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses de prorogation ci-jointes.

Director - Directeur

November 1, 1999 / le 1 novembre 1999

Date of Continuance - Date de la prorogation

Canada



Industry Canada

Industrie Canada

**Certificate
of Amendment**

**Canada Business
Corporations Act**

**Certificat
de Modification**

**Loi canadienne sur
les sociétés par actions**

QuestAir Technologies Inc.

367800-8

Name of corporation-Dénomination de la société

I hereby certify that the articles of the
above-named corporation were amended:

- a) under section 13 of the *Canada Business Corporations Act* in accordance with the attached notice;
- b) under section 27 of the *Canada Business Corporations Act* as set out in the attached articles of amendment designating a series of shares;
- c) under section 179 of the *Canada Business Corporations Act* as set out in the attached articles of amendment;
- d) under section 191 of the *Canada Business Corporations Act* as set out in the attached articles of reorganization;

Corporation number-Numéro de la société

Je certifie que les statuts de la société
susmentionnée ont été modifiés:

- ☐ a) en vertu de l'article 13 de la *Loi canadienne sur les sociétés par actions*, conformément à l'avis ci-joint;
- ☐ b) en vertu de l'article 27 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses modificatrices ci-jointes désignant une série d'actions;
- ☒ c) en vertu de l'article 179 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses modificatrices ci-jointes;
- ☐ d) en vertu de l'article 191 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses de réorganisation ci-jointes;

Director - Directeur

May 3, 2000 / le 3 mai 2000

Date of Amendment - Date de modification

Canada



Industry Canada Industrie Canada

Canada Business Corporations Act Loi canadienne sur les sociétés par actions

FORM 4
ARTICLES OF AMENDMENT
(SECTION 27 OR 177)

FORMULE 4
CLAUSES MODIFICATRICES
(ARTICLES 27 OU 177)

1 - Name of corporation - Dénomination de la société

QUEST AIR GASES INC.

2 - Corporation No. - N° de la société

367800-8

3 - The articles of the above-named corporation are amended as follows:

Les statuts de la société mentionnée ci-dessus sont modifiés de la façon suivante:

1. The Articles of Continuance of the Corporation be amended:

- (a) pursuant to subsection 173(1)(a) of the *Canada Business Corporations Act*, to change the name of the Corporation from Quest Air Gases Inc. to QuestAir Technologies Inc.;
- (b) pursuant to subsection 173(1)(g) of the *Canada Business Corporations Act*, to change the rights, privileges, restrictions and conditions set out in Schedule 1 to the Articles of Continuance to the issued and unissued Class A Preferred shares by deleting the same and substituting therefor the rights, privileges, restrictions and conditions thereto set out in Schedule 1 hereto;
- (c) pursuant to subsection 173(1)(g) of the *Canada Business Corporations Act*, to change the rights, privileges, restrictions and conditions set out in Schedule 1 to the Articles of Continuance to the issued and unissued Class B Preferred shares by deleting the same and substituting therefor the rights, privileges, restrictions and conditions set forth in Schedule 1 hereto; and
- (d) to reflect the foregoing amendments to the Articles of Continuance by replacing and superseding present Schedule 1 to the Articles of Continuance by Schedule 1 attached hereto.

Date

April 25, 2000

Signature

DAN PARMAR

Title - Titre

Vice-President Finance and Chief Financial Officer

Filed - Déposée

MAY 03 2000

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.